

HURRICANE HARVEY AIR QUALITY MONITORING HOUSTON, TX

BACKGROUND:

- ASPECT is a fixed-wing aircraft that serves as the EPA's real-time chemical and radiological detection, infrared, and photographic imagery platform. This technology has been exercised and deployed during major emergencies to support our Federal, State, Tribal and local government response partners.
- ASPECT deployed to Addison, TX with specialized EPA personnel and flew 28 missions over a 13-day deployment.
- The EPA's mobile assets provided over 100 hours of chemical screening, thermal imagery and aerial imagery data from 134 Risk Management Plan facilities, 456 drinking water plants, and 105 waste water facilities impacted by Hurricane Harvey. This information was shared with the federal, state, and local governments involved in the hurricane response as part of a rapid needs assessment to aid them in identifying priority target areas that needed additional attention. It also allowed them to provide the public with some preliminary information about the integrity of facilities.

KEY POINTS:

- During Hurricane Harvey, the State of Texas specifically requested assistance from the EPA for aerial high-resolution imaging of critical infrastructure in the widespread impacted area. EPA's mobile assets afforded response personnel the capability to identify potential sources of hazardous chemicals.
- NASA offered to fly a DC-8 plane used as part of their Atmospheric Tomography Mission (ATom), which studies the impact of human-produced air pollution on greenhouse gases and on chemically reactive gases in the atmosphere, in impacted areas during the response to Hurricane Harvey.
- The State of Texas did not authorize a mission assignment for the deployment of the NASA equipment based on a ground-based monitoring network already in place, including the EPA's deployment of the Trace Atmospheric Gas Analyzer (TAGA), Portable High-Throughput Integrated Laboratory System (PHILIS), and Airborne Spectral Photometric Environmental Collection Technology (ASPECT) assets.
- Congressional Interest: Representatives Johnson, Fletcher, and Sherrill, of the House Science, Space and Technology Committee sent a letter to the EPA expressing concerns that the EPA denied NASA the opportunity to collect air samples following Hurricane Harvey.

TALKING POINTS:

- At the request of the State of Texas, the EPA deployed a fixed-wing aircraft capable of real-time chemical and radiological detection, infrared, and photographic imagery as well as ground-based monitoring assets.
- These assets collected high-resolution photography and remote chemical sensing for target properties such as water treatment, wastewater treatment and Risk Management Plan facilities, including the Arkema chemical facility.